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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,339	12/27/2001	Joachim Charzinski	112740-386	5878
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BELL, BOYD & LLOYD, LLC P. O. BOX 1135 CHICAGO, IL 60690-1135			EXAMINER KERVEROS, JAMES C	
			ART UNIT 2133	PAPER NUMBER
DATE MAILED: 10/04/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/030,339

Applicant(s)

CHARZINSKI, JOACHIM

Examiner

JAMES C. KERVEROS

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/2001.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Priority***

This application is a 371 of PCT/EP00/05198, filed 06/06/2000.

Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d), for foreign Application (EPO) 99112406.6, filed 06/29/1999.

The certified copy has been filed in parent Application No. 10/030,339, filed on 12/27/2001.

This is a Non-Final Office Action in response to PRELIMINARY AMENDMENT filed 12/27/2001. Claims 1-9 are cancelled. Claims 10-18 are pending and presently under examination.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, on line 19, the term "possibly" renders the claim indefinite, because it is not clear if the other information is part of the packet to be sent out.

Claim 14 recites the limitation "further information" on line 2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10-14, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Gutman et al. (U.S. PATENT NO: 5,130,993).

Regarding Claim 10, Gutman discloses a method of monitoring bit transmission quality of encoded data over an unreliable network in communication systems, by checking for transmission errors after decoding, and resetting the encoder upon error detection, the method comprising:

Supplying and forming a first check information in packet-switched data transmitted over a reliable network, in which error recovery is built into the network, such as CRC error checking, provided between the nodes of a network, whenever a receiving node detects an error in a received frame, it requests retransmission of that frame from the sending node, (see, Background of the Invention, and Figure 3 and 4). A transmitting end system 6, including source 10 applies data to EOP 13, which passes the data on to the error detection code generator 14, which, in turn, introduces error detection information, such as cyclic redundancy code (CRC), into the data. The data and the CRC code information is transmitted to the receiving end system 6, via a

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transmission section, Figure 4, "X" channel section having a plurality of transmission devices via nodes a, b, c and d. The error detector 20 receives the transmitted data and checks them for errors. If errors are detected, the receiving EOP 17 will request retransmission of the data as described above. Thus, the decoder 22 will always receive data free of channel errors, will always remain in synchronization with the encoder 12, and will decode these data and pass them on to the destination 24.

Comparing the check information item, using error detector 20, which receives the transmitted data and checks them for errors, on arrival of the packet with a check information item formed in the receiving device (destination 24).

Forming a second check information, for example, along "X" channel section between nodes a, b over the network system 8, Figure 3, which is repeated at numerous nodes along the virtual circuit (Figure 4), where the second check information is formed by the second error detection code generator 15 (e.g., a CRC generator), which introduces further error detection information into the data. The data are then encoded in encoder 12 and transmitted over channel 16 along with the CRC code to the second error detector 21.

Evaluating the second check information item at the receiving end, where the data are decoded in decoder 22. Errors introduced on channel 16 may be present in the data and, if so, the decoded data will also contain errors.

Comparing the second check information item using second error detector 21 for detecting errors introduced in transmitting the data over the channel 16, corresponding to channel section between nodes a, b over the network system 8.

Regarding Claim 11, Gutman discloses providing a frame structure, such as error detection code generators 14 and 15 for generating and storing the first and second cyclic redundancy code (CRC) checks for the transmission of the packets via the transmission section, Figure 4, "X" channel section via nodes a, b, c and d.

Regarding Claim 12, Gutman discloses determining the transmission quality of the entire transmission section via nodes a, b, c and d, by evaluating the first check information item at the receiving end 24, using error detector 20, which receives the transmitted data and checks them for errors, on arrival of the packet with a check information item formed in the receiving device (destination 24).

Regarding Claim 13, Gutman discloses determining the transmission quality of individual subsections between a, b, c and d, by evaluating the second check information item, using second error detector 21 for detecting errors introduced in transmitting the data over the channel 16, corresponding to channel section between nodes a, b over the network system 8. Then, error detector 20 receives the transmitted data and checks them for errors, at the receiving end.

If errors are detected, the receiving EOP 17 will request retransmission of the data as described above. Thus, the decoder 22 will always receive data free of channel errors, will always remain in synchronization with the encoder 12, and will decode these data and pass them on to the destination 24.

Regarding Claim 14, Gutman discloses a frame header with cyclic redundancy code (CRC) formed by error detection code generator 14, for packet-switched data

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transmitted over a reliable network, in which error recovery is built into the network, where the CRC error checking is provided between the nodes of a network.

Regarding Claim 17, Gutman discloses wherein the transmitting and receiving devices (nodes a, b, c and d) are constructed as switching nodes for packet-switched data, Figure 4.

Regarding Claim 18, Gutman discloses wherein the transmission devices (nodes a, b, c and d) are constructed as regenerative repeaters, since they transmit, receive or forward data. Packet-switched digital communication networks allow digital systems to communicate with each other. They typically include several nodes, which may transmit, receive or forward data. Data to be transmitted are loaded into frames along with a destination address, which determines which node is to receive the frame. The frames are sent from one node to another either directly or via a series of intermediate nodes. The communication channel established between nodes in a network is known as a virtual circuit (Background of the Invention).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gutman et al. (U.S.PATENT NO: 5,130,993) in view of Lewis et al. (US PATENT NO: 6,601,209) filed: March 17, 2000.

Regarding Claim 15, Gutman substantially describes a protocol using a timer to generate reset requests when the receiver does not acknowledge the requests in a timely fashion, which provides more efficient error recovery when there is selective retransmission of frames (instead of go-back-n retransmission). Gutman does not explicitly specify transmitting packets in accordance with an Internet Protocol. However, in analogous art, Lewis et al. (US PATENT NO: 6,601,209) describes in claim 14, a method for transmitting Internet Protocol (IP) data packets over a fading wireless Internet communication channel, by applying error control codes to the IP data packets; interleaving the IP data packets on more than one format basis; transmitting the IP data packets across the fading Internet communication channel; de-interleaving the IP data packets; and detecting and correcting errors incurred during transmission of the IP data packets over the fading Internet communication channel, (Figure 1, Lewis).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to transmit data packets over the communication network of Gutman using an Internet Protocol (IP) as taught by Lewis, for the purpose of achieving reliable data transmission over fading internet communication channels. A person skilled in the art would have motivated to incorporate an interleaver as taught by Lewis, since the interleaving "spreads out" transmission errors over several IP packets and



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thus makes the error control and correction process more effective and efficient, see

Abstract.

Regarding Claim 16, Gutman does not explicitly disclose "producing the second check information item by a Bit Interleaved Parody calculation". However, in analogous art, Lewis et al. (US PATENT NO: 6,601,209) discloses a transmitting device 12, including an interleaver circuit 22, which interleaves the IP data packets before transmitting them over the fading Internet channel 16. Prior to transmitting the MPEG data, the transmitting device applies binary BCH error control codes to the header portion of each IP packet and RS error control codes to the payload portion of each IP packet. Then, a predetermined number of IP packets are interleaved, as shown in Figures 1 and 2.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to generate error control codes in the transmitting system of Gutman, using an interleaver circuit as taught by Lewis, for the purpose of interleaving data packets before transmitting them over the communication network. A person skilled in the art would have been motivated to incorporate an interleaver as taught by Lewis, since the interleaving "spreads out" transmission errors over several IP packets and thus makes the error control and correction process more effective and efficient, thus achieving reliable data transmission over fading internet communication channels, see Abstract, Lewis.

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**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES C. KERVEROS whose telephone number is (571) 272-3824. The examiner can normally be reached on 9:00 AM TO 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Date: 28 September 2005  
Office Action: Non-Final Rejection

JAMES C KERVEROS  
Examiner  
Art Unit 2133

By:  \_\_\_\_\_